

Permit Fact Sheet

General Information

Permit Number:	WI-0050822-08-0
Permittee Name:	Seneca Foods Corporation Mayville
Address:	PO Box 27
City/State/Zip:	Mayville, WI 53050
Discharge Location:	Outfall 013 North drain tile is located in the SW ¼ of NE ¼ Section 34 T12N, R16E, Dodge County. Outfall 014 South drain tile is located in the NE ¼ of the SE ¼ of Section 34 T12N, R16E, Dodge County. Both Outfalls are located on approved Spray Irrigation fields located North of Raachs Hill Rd, and West of Hwy V. Approved Spray Irrigation fields are located in Sections 23, 26, 27, and 34, T12N, R16E, Dodge County
Receiving Water:	Unnamed tributary to the East Branch of the Rock River (Outfall 013), unnamed wetlands in the Rock River Basin (Outfall 014), and groundwaters of the Rock River Drainage Basin via Spray Irrigation.
StreamFlow (Q _{7,10}):	Low flow 7Q10 of the unnamed ditch to the East Branch of the Rock River at the discharge is 0 cfs.
Stream Classification:	Warmwater sport fish community (Outfall 013), Wetland/limited aquatic life (Outfall 014)

Facility Description

Seneca Foods Mayville (Seneca) is an existing discharger. Seneca cans peas, corn, and mixed vegetables. Production, pack season, at this facility is June through October. During this time period the facility operates 24-hours a day, 7 days a week. Process wastewater and can cooling water are spray irrigated via three force mains. Monitoring wells are located around separate zones of the spray irrigation fields to monitor the groundwater. Byproduct solids are hauled off site. Process wastewater, byproduct solids, and silage leachate can be land applied under this permit.

Outfall 013, also known as North Drain Tile, is located in Spray Field G. This drain tile is typically closed after the pack season and reopened in the spring prior to the start of the pack season to allow the field to dry out. No samples are taken when the drain tile is closed but the permittee shall report zeros on the eDMR to indicate no discharge. Data at this outfall historically has indicated that BOD exceedances are a possibility and therefore Seneca has implemented a process of recirculating the water discharged from the drain tile back to the spray field therefore, there is typically no discharge to the unnamed tributary. This permit authorizes discharge to the unnamed tributary when Seneca is able to meet effluent limitations and therefore includes required monitoring and limitations. Samples are taken from the pump line prior to discharge to the waterway after a sump. Discharge from this outfall includes precipitation, groundwater, and treated wastewater or any combination of these waters.

Outfall 014, also known as South Drain Tile, is located in Spray Field H. This drain tile is also closed after the pack season and reopened in the spring prior to the pack season. This drain tile drains to an agricultural ditch that becomes a grassed swale prior to discharge to a wetland complex that eventually discharges to a surface water. The Department completed an assessment of the discharge from Outfall 014 and determined that this outfall discharges to a wetland. Discharge from this outfall includes rainwater, groundwater, and treated wastewater or any combination of these waters. Flow is monitored by hand using the bucket method currently. Samples are taken from the outfall pipe after a sump prior

to discharge to the waterway. The permittee reports zero when there is no flow and is not required to monitor when the tile is closed.

Sample Point Designation		
Sample Point Number	Discharge Flow, Units, and Averaging Period	Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)
001	23-28 MGY	Discharge from Outfall 001 shall be limited to process wastewater. Samples shall be collected prior to discharging to the 179 acre spray irrigation system located at the SW 1/4 , SW 1/4 of Section 23, the NW 1/4, NW1/4 of Section 26, the SW1/4, NE1/4 of Section 27, the SE1/4 of Section 27 and the SW1/4, NW1/4 of Section 26, the SE1/4, NE1/4 of Section 34, and the NE1/4, SE1/4 of Section 34 all in T12N, R16E, Dodge County.
003	No process wastewater or leachate was landspread during the current permit period	Landspreading of liquid wastes (silage leachate and/or process wastewater)
004	All byproduct solids are currently being used by local farmers as a source of feed. No landspreading has occurred during the current permit period.	Landspreading of byproduct solids
013	27,100 gpd (2019)	Surface water discharge to an Unnamed Tributary of the East Branch of the Rock River: North drain tile discharge located in Spray Field G. Sample taken from the pump valve prior to discharge to the waterway
014	15,800 gpd (2018)	Surface water discharge to a Wetland: South drain tile discharge located in Spray Field H. Sample taken at outfall pipe immediately prior to discharge to waterway.

Sample Point Designation For Groundwater Monitoring Systems			
System	Sample Pt Number	Well Name	Comments
Spray Fields B, C, D, E and F	806	W-106 (806)	
	811	W-111 (811)	
	813	W-113 (813) BACKGRD	
	816	W-103 (816)	
	817	W-104 (817)	
	818	W-105 (818)	

Sample Point Designation For Groundwater Monitoring Systems			
System	Sample Pt Number	Well Name	Comments
	819	W-115 (819)	
	893	MW-123 (893)	
South Spray Fields G and H	886	W-116 (886) BACKGRD	
	887	W-117 (887)	
	888	W-118 (888)	
	889	W-119 (889)	
	890	W-120 (890)	
	891	W-121 (891)	
	892	MW-122 (892)	

1 Surface Water - Proposed Monitoring and Limitations

Sample Point Number: 013- North Drain Tile

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		gpd	Weekly	Estimated	
BOD5, Total	Daily Max	10 mg/L	Weekly	Grab	
BOD5, Total	Monthly Avg	10 mg/L	Weekly	Grab	
pH Field	Daily Min	6.0 su	Weekly	Grab	
pH Field	Daily Max	9.0 su	Weekly	Grab	
Dissolved Oxygen	Daily Min	7.0 mg/L	Weekly	Grab	
Chloride		mg/L	Weekly	Grab	Monitoring required in 2024.
Temperature Maximum		deg C	3/Week	Measure	Monitoring required in 2024.
Suspended Solids, Total	Daily Max	40 mg/L	Weekly	Grab	Effective upon reissuance and this limit will be retained beyond the effective date of the final limits as it represents a minimum control level.
Suspended Solids,	Monthly Avg	40 mg/L	Weekly	Grab	Effective upon reissuance and this limit will be

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Total					retained beyond the effective date of the final limits as it represents a minimum control level.
Suspended Solids, Total		lbs/day	Weekly	Calculated	Report daily mass discharged using Equation 1a. in the Water Quality Trading (WQT) section.
WQT Credits Used (TSS)		lbs/month	Monthly	Calculated	Report WQT TSS Credits used per month using Equation 3c. in the Water Quality Trading (WQT) section. Available TSS Credits are specified in Table 2 and in the approved Water Quality Trading Plan.
WQT Computed Compliance (TSS)	Daily Max	5.67 lbs/day	Monthly	Calculated	Report the WQT TSS Computed Compliance value using Equation 5a. in the Water Quality Trading (WQT) section. Values entered on the last day of each week.
WQT Computed Compliance (TSS)	Monthly Avg	3.46 lbs/day	Monthly	Calculated	Report the WQT TSS Computed Compliance value using Equation 5b. in the Water Quality Trading (WQT) section. Value entered on the last day of the month
WQT TSS Credits Used (TSS)	Annual Total	25,800 lbs/yr	Annual	Calculated	The sum of total monthly credits used may not exceed Table 2 values listed below.
Phosphorus, Total	Monthly Avg	0.7 mg/L	Weekly	Grab	Effective upon reissuance and this limit will be retained beyond the effective date of the final limits as it represents a minimum control level. See “Water Quality Trading (WQT)” sections for more information.

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Phosphorus, Total		lbs/day	Weekly	Calculated	Report daily mass discharged using Equation 2a. in the Water Quality Trading (WQT) section.
WQT Credits Used (TP)		lbs/month	Monthly	Calculated	Report WQT TP Credits used per month using Equation 4b. in the Water Quality Trading (WQT) section. Available TP Credits are specified in Table 2 and in the approved Water Quality Trading Plan.
WQT Computed Compliance (TP)	Monthly Avg	0.03 lbs/day	Monthly	Calculated	Report the WQT TP Computed Compliance value using Equation 6a. in the Water Quality Trading (WQT) section. Value entered on the last day of the month.
WQT Credits Used (TP)	Annual Total	86.3 lbs/yr	Annual	Calculated	The sum of total monthly credits used may not exceed Table 2 values listed below.
Chloride		mg/L	Weekly	Grab	Monitoring required in 2024.
Temperature Maximum		deg C	3/Week	Measure	Monitoring required in 2024.
Acute WET		TUa	See Listed Qtr(s)	24-Hr Flow Prop Comp	
Chronic WET		TUc	See Listed Qtr(s)	24-Hr Flow Prop Comp	

Changes from Previous Permit

TMDL limits for phosphorus and suspended solids will be effective during this permit term. Monitoring parameters were added to track compliance with Water Quality Trading to meet TMDL limits. Chloride, temperature and WET testing requirements updated. Monitoring frequency was changed to monthly any time the drain tiles are open.

Explanation of Limits and Monitoring Requirements

Water Quality Based Limits and WET Requirements

Refer to the WQBEL memo for the detailed calculations, prepared by the Water Quality Bureau dated December 4, 2020 used for this issuance. In accordance with the federal regulation 40 CFR 122.45(d), limits in this permit are to be expressed as daily maximum and monthly average limits whenever practicable.

BOD, Dissolved Oxygen, and pH - Limits are continued at the levels in the current permit. The DO limit of 7 mg/L daily minimum is carried over from the current permit. This value was used in the calculation of the BOD limit to ensure attainment of the water quality criteria in ch. NR 102, Wis. Adm. Code, for fish and aquatic life. There was a change in expression of limits per the 2016 revisions to s. NR 205.065, Wis. Adm. Code. In accordance with the federal regulation 40 CFR 122.45(d), limits in this permit are to be expressed as daily maximum and monthly average limits whenever practicable. The pH limits are based on chs. NR 102 Wis. Adm. Code pH standards.

TSS - The current concentration limits are retained and function as the minimum control level to prevent backsliding.

Rock River TMDL TSS - Seneca Foods Corporation Mayville should comply with the 15% TSS reduction goal to conform to the expectations set forth in the Rock River TMDL for Reach 14. This reduction is applied to the currently applicable effluent limitation of 40 mg/L as a daily maximum. Therefore, a TSS limitation of 5.67 lbs/day, expressed as a daily maximum limitation, is recommended for the proposed permit. USEPA's statistical method for converting from daily maximum to monthly average limits is used to derive the monthly average limit of 3.46 lbs/day.

Phosphorus – Phosphorus requirements are based on the Phosphorus Rules that became effective December 1, 2010 as detailed in NR 102 Water Quality Standards and NR 217 Effluent Standards and Limitations for Phosphorus. Chapter NR 217 of the Wis. Adm. Code addresses point source dischargers of phosphorus to surface waters. Currently in NR 217 Wis. Adm. Code there are two methods used to determine if a phosphorus limit is needed: a technology based effluent limit (TBEL) and a water quality based effluent limit (WQBEL). In this case, the WQBEL is 0.03 lbs/day (monthly average), derived from the TMDL reach reduction goal. This final effluent limit was derived from and complies with the applicable water quality criterion. A phosphorus concentration limit is necessary to prevent backsliding during the term of the permit. The interim limit of 0.7 mg/L will be retained in the permit as a minimum control.

The wastewater treatment facility is not able to meet the WQBEL. This permit authorizes the use of trading as a tool to demonstrate compliance with the phosphorus WQBELs. This permit includes terms and conditions related to the Water Quality Trading Plan (WQT-2021-0003) or approved amendments thereof. The total 'WQT TP Credits' available are designated in the approved WQT Plan. The City is implementing a variety of management practices including streambank stabilization, crop land improvements, and barnyard practices. The WQT Plan proposes the generation of a range of 43.1 lbs/yr to 86.3 lbs/yr of phosphorus credits for the next five years.

Additional WQT sections in the permit provide information on compliance determinations, annual reporting and re-opening of the permit.

Rock River TMDL Phosphorus - The East Branch of the Rock River, which is the waterbody downstream of the unnamed tributary where Outfall 013 discharges, was listed as impaired in 2006 so the TMDL-based limit is considered sufficiently protective and can be included in the WPDES permit absent the s. NR 217.13 WQBEL. Seneca Foods Corporation Mayville is located in Reach 14 of the East Branch River from Gill Creek to Mile 11. The phosphorus load reduction target for treatment facilities in this reach is 78%. In the Rock River TMDL, TMDL-derived limits are monthly average limitations expressed in terms of mass. Therefore, a phosphorus limitation of 0.03 lb/day, expressed as a monthly average, was recommended. The concentration limit of 0.7 mg/L in the current permit is retained.

Chloride – After review of the effluent data the effluent concentrations are below the calculated WQBELs for chloride. Therefore, no effluent limits are needed. Chloride monitoring is recommended to ensure that a minimum of 11 sample results are available at the next permit issuance

Thermal - Requirements for Temperature are included in NR 102 Subchapter II Water Quality Standards for Temperature and NR 106 Subchapter V Effluent Limitations for Temperature. Thermal discharges must meet the Public Health criterion of 120 degrees F and the Fish & Aquatic Life criteria which are established to protect aquatic communities from lethal and sub-lethal thermal effects. Monitoring in the 4th year of the permit is included to evaluate the need for effluent

limits. The Department may reduce temperature monitoring after public notice pending additional information from the permittee.

Whole Effluent Toxicity - Whole effluent toxicity (WET) testing requirements and limits (if applicable) are determined in accordance with ss. NR 106.08 and NR 106.09 Wis. Adm. Code, as revised August 2016. (See the current version of the Whole Effluent Toxicity Program Guidance Document and checklist and WET information, guidance and test methods at <http://dnr.wi.gov/topic/wastewater/wet.html>).

After consideration of the guidance provided in the Department's WET Program Guidance Document (2019) and other information described above, **two acute and annual chronic WET tests are recommended** in the reissued permit.

- **Acute:** July 1 – September 30, 2023; July 1 – September 30, 2025
- **Chronic:** July 1 – September 30, 2021; July 1 – September 30, 2022; July 1 – September 30, 2023; July 1 – September 30, 2024; July 1 – September 30, 2025.

Sample Point Number: 014- South Drain Tile

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		gpd	Weekly	Grab	
BOD5, Total	Daily Max	40 mg/L	Weekly	Grab	
BOD5, Total	Monthly Avg	20 mg/L	Weekly	Grab	
Suspended Solids, Total	Daily Max	40 mg/L	Weekly	Grab	
Suspended Solids, Total	Monthly Avg	20 mg/L	Weekly	Grab	
Suspended Solids, Total		lbs/day	Weekly	Calculated	
pH Field	Daily Min	6.0 su	Weekly	Grab	
pH Field	Daily Max	9.0 su	Weekly	Grab	
Dissolved Oxygen	Daily Min	4.0 mg/L	Weekly	Grab	
Chloride		mg/L	Weekly	Grab	Monitoring required in 2024.
Phosphorus, Total		mg/L	Weekly	Grab	Monitoring required in 2024.
Phosphorus, Total		lbs/day	Weekly	Calculated	Monitoring required in 2024.
Temperature Maximum		deg C	3/Week	Measure	Monitoring required in 2024.

Changes from Previous Permit

Ammonia monitoring is no longer included in the permit. Temperature monitoring is required in the fourth year of the permit. Phosphorus monitoring has been reduced to occurring only during the fourth year of the permit. Monitoring frequency was changed to monthly any time the drain tiles are open.

Explanation of Limits and Monitoring Requirements

Water Quality Based Limits and WET Requirements and Disinfection (if applicable)

Refer to the WQBEL memo for the detailed calculations, prepared by the Water Quality Bureau dated December 4, 2020 used for this issuance. Outfall 014 discharges to a wetland and therefore water quality based effluent limitations (WQBELs) were calculated based on the waterway classification of Limited Aquatic Life as a default. This is standard default for wetland surface water discharges. In accordance with the federal regulation 40 CFR 122.45(d), limits in this permit are to be expressed as daily maximum and monthly average limits whenever practicable.

BOD, Dissolved oxygen, and pH - Limits are continued at the levels in the current permit. There was a change in expression of limits per the 2016 revisions to s. NR 205.065, Wis. Adm. Code. In accordance with the federal regulation 40 CFR 122.45(d), limits in this permit are to be expressed as daily maximum and monthly average limits whenever practicable. The pH limits are based on chs. NR 102 Wis. Adm. Code pH standards.

TSS – Limits are continued at the levels of the current permit. No change in discharge design flow or receiving water has taken place.

Rock River TMDL TSS – Given the small effluent flow volume and that discharge is to an internally-drained wetland, the Department finds that the discharge at Outfall 014 has no potential to cause or contribute to an impairment in the adjacent stream, or further downstream waters including the Rock River TMDL Basin. For these reasons, TSS mass limits based on the Rock River TMDL are not recommended in the WQBEL memo.

Phosphorus - Evaluation determined that categorical limits are not required for phosphorus.

Rock River TMDL Phosphorus - Evaluation for compliance with the Rock River TMDL is also required. A field assessment was completed by DNR Water Quality Biologist Michael Sorge on May 27, 2015 at Outfall 014. This assessment concluded that the effluent from Outfall 014 enters a ditch which drains to a wetland (see WQBEL Attachment #3 for the report). Based on the assessment done in 2015 and completion of the Downstream Protection Checklist for Phosphorus, the Department concludes the discharge does not have the potential to cause or contribute to downstream impairment. Therefore, phosphorus water quality based effluent limitations in accordance with NR 217 and the mass limits based on the Rock River TMDL are not recommended at this time to protect local or downstream water quality. Sampling in the fourth year of the permit term at a frequency to ensure at least 11 samples are available is recommended.

Chloride – After review of the effluent data the effluent concentrations are below the calculated WQBELs for chloride. Therefore, no effluent limits are needed. Chloride monitoring is recommended to ensure that a minimum of 11 sample results are available at the next permit issuance.

Thermal - Requirements for Temperature are included in NR 102 Subchapter II Water Quality Standards for Temperature and NR 106 Subchapter V Effluent Limitations for Temperature. Thermal discharges must meet the Public Health criterion of 120 degrees F and the Fish & Aquatic Life criteria which are established to protect aquatic communities from lethal and sub-lethal thermal effects. There is very limited temperature data for the discharge so monitoring in the 4th year of the permit is included to evaluate the need for effluent limits. The Department may reduce temperature monitoring after public notice pending additional information from the permittee.

Ammonia Nitrogen – Ammonia as not detected in monitoring data, therefore no limits for ammonia nitrogen are recommended for Outfall 014 in the reissued permit. Monitoring is decreased to four samples to be reported on the permit application.

2 Land Treatment – Proposed Monitoring and Limitations

Sample Point Number: 001- SPRAY IRRIGATION

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Total Daily	
Hydraulic Application Rate	Monthly Avg	3,500 gal/ac/day	Monthly	Calculated	This limit applies May 1 to October 31 annually
Hydraulic Application Rate	Monthly Avg	0 gal/ac/day	Monthly	Calculated	This limit applies November 1 to April 30 annually
BOD5, Total		mg/L	Weekly	Composite	
Chloride		mg/L	Weekly	Composite	
Nitrogen, Total Kjeldahl		mg/L	Weekly	Composite	
Nitrogen, Max Applied On Any Zone	Annual Total	600 lbs/ac/yr	Annual	Total Annual	See sections 2.2.1.4 and 2.2.1.5 for additional information on limits.

Changes from Previous Permit:

The ban on spray irrigation during the months of November to April are included as a hydraulic application rate limit of zero. The permittee should report zero (0) any time there is no flow.

Explanation of Limits and Monitoring Requirements

Requirements for land treatment of industrial wastewater are determined in accordance with ch. NR 214 Wis. Adm. Code.

3 Groundwater – Proposed Monitoring and Limitations

Groundwater limits and requirements are determined in accordance with ch. NR 140, Wis. Adm. Code and are re-evaluated for each permit term. Ammonia nitrogen retains the PAL and ES limits from code. Indicator parameter Preventive Action Limit (PAL) values are established per s. NR 140.20 Wis. Adm. Code for organic nitrogen, total dissolved solids and pH using data from the last 5 years. Alternative Concentration Limits for nitrite + nitrate nitrogen and chloride as allowed under s. NR 140.28 Wis. Adm. Code, are established on a case by case basis using data from the last 5 years.

3.1 Groundwater Monitoring System for the South Spray Fields G and H

Location of Monitoring system: Perimeter of the south spray fields

Wells to be Monitored: W-116 (886) BACKGRD, W-117 (887), W-118 (888), W-119 (889), W-120 (890), W-121 (891), MW-122 (892)

Well Used To Calculate PALs: W-116 (886) BACKGRD

Compliance Well(s) for Enforcement Standards (ESs): MW-122 (892), W-121 (891), W-120 (890), W-119 (889), W-117 (887)

Parameter	Units	Preventative Action Limit	Enforcement Standard	Frequency
Depth To Groundwater	feet	*****	N/A	Quarterly
Groundwater Elevation	feet MSL	*****	N/A	Quarterly
Chloride Dissolved	mg/L	140	250	Quarterly
COD	mg/L	32	N/A	Quarterly
Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	Quarterly
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	2.1	10	Quarterly
Nitrogen, Organic Dissolved	mg/L	2.2	N/A	Quarterly
pH Field	su	8.3	N/A	Quarterly
Solids, Total Dissolved	mg/L	600	N/A	Quarterly
Sulfate, Total	mg/L	170	250	Quarterly

Changes from Previous Permit:

Updated ACLs and indicator PALs.

Explanation of Limits and Monitoring Requirements

Well W-118 has reduced sampling due to location of the well, only 'Depth to Groundwater' and 'Groundwater Elevation' are required for this well. Values are determined in the November 16, 2020 ch. NR 140 Groundwater Evaluation. Groundwater limits and requirements are determined in accordance with ch. NR 140, Wis. Adm. Code. Indicator parameter Preventive Action Limit (PAL) values are established per s. NR 140.20 Wis. Adm. Code. Alternative Concentration Limits as allowed under s. NR 140.28 Wis. Adm. Code, are established on a case by case basis.

3.2 Groundwater Monitoring System for Spray Fields B, C, D, E and F

Location of Monitoring system: Perimeter of the Central & North spray fields

Wells to be Monitored: W-106 (806), W-111 (811), W-113 (813) BACKGRD, W-103 (816), W-104 (817), W-105 (818), W-115 (819), MW-123 (893)

Well Used To Calculate PALs: W-113 (813) BACKGRD

Compliance Well(s) for Enforcement Standards (ESs): W-103 (816), W-111 (811)

Parameter	Units	Preventative Action Limit	Enforcement Standard	Frequency
Depth To Groundwater	feet	*****	N/A	Quarterly
Groundwater Elevation	feet MSL	*****	N/A	Quarterly
Chloride Dissolved	mg/L	240	250	Quarterly
COD	mg/L	33	N/A	Quarterly
Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	Quarterly

Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	4.6	10	Quarterly
Nitrogen, Organic Dissolved	mg/L	2.3	N/A	Quarterly
pH Field	su	8.4	N/A	Quarterly
Solids, Total Dissolved	mg/L	690	N/A	Quarterly
Sulfate, Total	mg/L	150	250	Quarterly

Changes from Previous Permit:

Updated ACLs and indicator PALs.

Explanation of Limits and Monitoring Requirements

Well W-105 has reduced sampling due to location of the well, only 'Depth to Groundwater' and 'Groundwater Elevation' are required for this well. Values are determined in the November 16, 2020 ch. NR 140 Groundwater Evaluation. Groundwater limits and requirements are determined in accordance with ch. NR 140, Wis. Adm. Code. Indicator parameter Preventive Action Limit (PAL) values are established per s. NR 140.20 Wis. Adm. Code. Alternative Concentration Limits as allowed under s. NR 140.28 Wis. Adm. Code, are established on a case by case basis.

4 Land Application - Sludge/By-Product Solids (industrial only)

Sample Point Number: 003- Land Spreading of Liquid Waste

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		gal/month	Monthly	Total Monthly	
BOD5, Total		mg/L	Monthly	Grab	
Nitrogen, Total Kjeldahl		mg/L	Monthly	Grab	
Chloride		mg/L	Monthly	Grab	
Phosphorus, Total		mg/L	Monthly	Grab	
Phosphorus, Water Extractable		% of Tot P	Annual	Grab	
Potassium, Total Recoverable		mg/L	Monthly	Grab	
pH Field		su	Annual	Grab	

Changes from Previous Permit:

Added water extractable phosphorus testing.

Explanation of Limits and Monitoring Requirements

Requirements for land application of industrial sludge are determined in accordance with ch. NR 214 Wis. Adm. Code

Water Extractable Phosphorus - Water extractable phosphorus (WEP) is the coefficient for determining plant available phosphorus from measured total phosphorus. In Wisconsin, the Penn State Method is utilized and is expressed in percent. While a total P may be significant, the WEP may show that only a small percentage of the P is available to plants because of factors such as treatment processes and chemical addition that “tie-up” phosphorus limiting the amount of phosphorus that is plant available. As part of the Wisconsin’s nutrient management plan (NMP) requirements, the accounting of all fertilizers must be included over the NMP cycle. The fertilizer value of the waste needs to be communicated to the farmer and accounted for in the NMP.

Sample Point Number: 004- Spreading of Byproduct Solids

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Volume		gal/month	Monthly	Total Monthly	
Solids, Total		Percent	Annual	Grab	
Nitrogen, Total Kjeldahl		Percent	Annual	Grab	
Chloride		Percent	Annual	Grab	
Phosphorus, Water Extractable		% of Tot P	Annual	Grab	
Phosphorus, Total		Percent	Annual	Grab	
Potassium, Total Recoverable		Percent	Annual	Grab	

Changes from Previous Permit:

Added water extractable phosphorus testing and potassium.

Explanation of Limits and Monitoring Requirements

Requirements for land application of industrial sludge are determined in accordance with ch. NR 214 Wis. Adm. Code

The permittee currently sells all byproduct solids for animal feed per the 2019 permit application.

Water Extractable Phosphorus - Water extractable phosphorus (WEP) is the coefficient for determining plant available phosphorus from measured total phosphorus. In Wisconsin, the Penn State Method is utilized and is expressed in percent. While a total P may be significant, the WEP may show that only a small percentage of the P is available to plants because of factors such as treatment processes and chemical addition that “tie-up” phosphorus limiting the amount of phosphorus that is plant available. As part of the Wisconsin’s nutrient management plan (NMP) requirements, the accounting of all fertilizers must be included over the NMP cycle. The fertilizer value of the waste needs to be communicated to the farmer and accounted for in the NMP.

5 Schedules

5.1 Permit Application Submittal

The permittee shall file an application for permit reissuance in accordance with NR 200, Wis. Adm. Code.

Required Action	Due Date
Permit Application Submittal: Submit a complete permit application to the Department no later than 180 days prior to permit expiration.	10/02/2025

Explanation of Schedule

This is included as a reminder of when the reissuance application will be due. The permittee is a seasonal discharger and therefore should plan to complete sampling required for the permit application during the pack season.

5.2 Land Treatment Annual Report

Required Action	Due Date
Submit Annual Land Treatment Report #1: Submit the Annual Land Treatment Report by January 31st for the previous calendar year.	01/31/2022
Submit Annual Land Treatment Report #2: Submit the Annual Land Treatment Report by January 31st for the previous calendar year.	01/31/2023
Submit Annual Land Treatment Report #3: Submit the Annual Land Treatment Report by January 31st for the previous calendar year.	01/31/2024
Submit Annual Land Treatment Report #4: Submit the Annual Land Treatment Report by January 31st for the previous calendar year.	01/31/2025
Submit Annual Land Treatment Report #5: Submit the Annual Land Treatment Report by January 31st for the previous calendar year.	01/31/2026

Explanation of Schedule

This is included as a reminder of when the annual reports will be due.

5.3 Land Treatment Management Plan

A management plan is required for the land treatment system.

Required Action	Due Date
Land Treatment Management Plan: Submit an update to the management plan to optimize the land treatment system performance and demonstrate compliance with Wisconsin Administrative Code NR 214.	03/31/2022

Explanation of Compliance Schedule

The facility regulator requested that they update the land treatment management plan after the permit is reissued.

5.4 Land Application Management Plan

A management plan is required for the land application system.

Required Action	Due Date
Land Application Management Plan: Submit an update to the management plan to optimize the land application system performance and demonstrate compliance with Wisconsin Administrative Code NR 214.	03/31/2022

Explanation of Compliance Schedule

The facility regulator requested that they update the land application management plan after the permit is reissued.

5.5 Annual Water Quality Trading (WQT) Report

Required Action	Due Date
Annual WQT Report: Submit an annual WQT report that shall cover the first year of the permit term. The WQT Report shall include: The number of pollutant reduction credits (lbs/month) used each month of the previous year to demonstrate compliance; The source of each month's pollutant reduction credits by identifying the approved water quality trading plan that details the source; A summary of the annual inspection of each nonpoint source management practice that generated any of the pollutant reduction credits used during the previous year; and Identification of noncompliance or failure to implement any terms or conditions of this permit with respect to water quality trading that have not been reported in discharge monitoring reports.	01/31/2022
Annual WQT Report #2: Submit an annual WQT report that shall cover the previous year.	01/31/2023
Annual WQT Report #3: Submit an annual WQT report that shall cover the previous year.	01/31/2024
Annual WQT Report #4: Submit the 4th annual WQT report. If the permittee wishes to continue to comply with phosphorus limits through WQT in subsequent permit terms, the permittee shall submit a revised WQT plan including a demonstration of credit need, compliance record of the existing WQT, and any additional practices needed to maintain compliance over time.	01/31/2025
Annual WQT Report Required After Permit Expiration: In the event that this permit is not reissued by the expiration date, the permittee shall continue to submit annual WQT reports by January 31 each year covering the total number of pollutant credits used, the source of the pollution reduction credits, a summary of annual inspection reports performed, and identification of noncompliance or failure to implement any terms or conditions of the approved water quality trading plan for the previous calendar year.	

Explanation of Schedules

Reports are required, starting in 2022, that include the following information:

- Verification that site inspections occurred;
- Brief summary of site inspection findings;
- Identification of noncompliance or failure to implement any terms or conditions of the permit or trading plan that have not been reported in discharge monitoring reports;
- Any applicable notices of termination or management practice registration; and
- A summary of credits used each month over the calendar year

Special Reporting Requirements

None

Other Comments:

None

Attachments:

Water Quality Based Effluent Limits – 12/4/2020

Groundwater Evaluation – 12/16/2020, revised 4/7/2021

Substantial Compliance Form – 1/28/2021

WQT Conditional Approval Letter – 2/2/2021

Proposed Expiration Date:

3/31/2026

Prepared By: Brenda Howald, Wastewater Specialist & Jennifer Jerich, Wastewater Specialist

Date: 2/25/2021

Revised Date post Fact Check: 4/7/2021; typographical errors corrected, groundwater limits updated (see updated GW evaluation), and updates to the WQT sections made.

Revised Date post Public Notice: